2007-10-30 Meeting Summary

Tuesday, October 30, 2007
7:50 AM

- **Summary**
  - On Monday morning, we stopped stacking at 6:30am with a 150mA stack due to problems with stacking rolling off.
  - After the 9am meeting, we resumed stacking in attempt to explore the problem:
    - Ran a 5 second cycle time
    - Moved stabilizing RF by 3Hz
    - Found that the Stacking VSA had been run in thermostat mode (VSARST =13), which is not working. We should run in stacking monitor mode (VSARST = 12).
  - Stack topped out at 163mA before the HEP shot was complete and we were able to transfer to the Recycler.
  - We transferred and then went back to our normal stack to 50mA and transfer
- **Stacking Numbers**
  - Stacked 204mA from 8:30am yesterday until 8:30am today.
  - Went from
    - 6 Booster turns at 4.5e12 on target
    - 7 Booster turns at 5.3-5.4e12 on target
    - Just before the 9am meeting, went to 8 turns running 6e12 on target.
  - Ran at a 2.2 second cycle time most of the night:
    - Stacked in the 13-14mA/hr range overnight
    - Had productions of 15-16 pbars/e6 protons
  - At 5am, switched to a 2.4 second cycle time.
    - Stack rate was the same or slightly better
    - Production went up to the 17-18 pbars/e6 proton range
  - Even though 2.4 seconds is a "sweet spot," we want to define our default stacking cycle time as 2.2 seconds and work to make it better in preparation for later NuMI operations.
- **Transfers**
  - Sent 310e10 over five sets of transfers with 21 total transfers
  - Efficiency was ~87%, but this is artificially low due to
    - 1 large set of nine transfers from a 163mA stack
    - 1 poor set of transfers that followed.
    - Problems with the 4-8GHz cooling gating.
- **Diagnostics**
  - Working towards getting all of our diagnostics back to an operational state.
    - BPI10D, which is used to measure the circulating beam intensity in the Debuncher, was restored to operation yesterday. A python configuration script had to be modified to reflect controls changes over the shutdown.
    - The 300MHz Accumulator emittance monitors (A:EMT3HN and A:EMT3VN) were reading back artificially low due to component moves made during the long shutdown. Studies were performed last week to collect calibration data, and the transforms were modified early yesterday afternoon.
      - Horizontal now reads 50% larger
      - Vertical now reads 3-4x larger.
- **Broken**:
  - Readback for the Core Betatron band 2 cooling is broken. Repairs would require a two hour Rings access (electronic worklist entry is in place), but is low priority since it only impacts the readback and not the functionality of the system.
  - Sigma readbacks for D/A SEM806. These are needed for Debuncher cooling tuning efforts.
  - 4-8GHz Momentum thermostating and gating.
- **Requests and Studies.**
  - Tune on stacking.
  - We may want to go to 4.4 seconds, depending on when we can transfer to Recycler next.

next.

- New AP2 BPM board will be installed. This requires turning off the overthruster for the work and turning back on the overthruster when the work is done.
- Evening shift
  - Stacking tuning
  - Semi-destructive D/A measurements